

**ABSTRACT OF THE INVENTION**

The invention provides a method for assigning a cellular function to a component of a biochemical system.

- 5 The method involves (a) determining a multidimensional shape space for one or more components of a biochemical system in a reference state; (b) perturbing a component within said biochemical system; (c) determining a perturbed multidimensional shape space for one or more
- 10 components of a pathway in said perturbed biochemical system, and (d) identifying a multidimensional coordinate point corresponding to a component of said perturbed pathway altered between reference and perturbed multidimensional shape spaces, said identified component
- 15 being assigned a cellular function of said perturbed pathway.